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COOPER ORNITHOLOGICAL CLUB

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MEETINGS OF THE COOPER ORNITHOLOGICAL CLUB

SOUTHERN DIVISION: At the Museum of History, Science, and Art, Exposition Park, Los Angeles. Time of meeting, 8 p. m., the last Thursday of every month. Take south-bound car from town; on Spring Street the car marked "University", on Hill Street the car marked "Vermont and Georgia". Get off at Vermont Avenue and Thirty-ninth Street. Walk two blocks east to Exposition Park. The Museum is the building with the large dome.

NORTHERN DIVISION: At the Museum of Vertebrate Zoology, University of California, Berkeley. Time of meeting, 8 p. m., the third Thursday of every month. Take any train or car to University Campus. The Museum of Vertebrate Zoology is a large corrugated iron building situated on the south side of the campus immediately north of the football bleachers.





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NESTING OF THE BOHEMIAN WAXWING IN NORTHERN BRITISH COLUMBIA

By ERNEST M. ANDERSON

WITH TWO PHOTOS BY THE AUTHOR

WHILE ON a general collecting trip in northern British Columbia during the summer of 1914, in the interests of the Provincial Museum, we rather unexpectedly discovered a breeding ground of the Bohemian Waxwing (*Bombycilla garrula*). Although a sharp look-out had been kept both by my companion, Mr. C. B. Garrett, and myself, throughout the month of June, no Waxwings were noted until the 7th of July, when an adult male was secured a short distance from "Hot Springs", situated on the east shore of Atlin Lake. Finding the specimen to be a male, I immediately hunted for its mate. A careful search was made for nearly two hours among the thickly growing spruce and pine trees, but in vain; it is quite probable that the bird shot had wandered some distance from its home, as no others were seen in the same section until well on in the fall.

Concluding that we were camped not far from the Waxwings' breeding grounds, we made an early start the following day in quest of their eggs. With the aid of a gasoline launch we were enabled to cover a wide extent of country, visiting many points on Atlin Lake, and some small isolated islands that otherwise would have been left unscanned. Our success on this occasion, therefore, was largely due to our adequate means of travel. After hunting all the forenoon without locating any Waxwings, we decided to renew our search farther down the lake during the afternoon.

Since no Waxwings had been noted near the lake shore or on adjacent islands, we headed our boat toward a group of small islands about a mile offshore and varying from about three to ten acres in size. All were timbered with growth of stunted spruce, pine and aspen, with undergrowth consisting chiefly of thick willow bushes.

On approaching the first island to within a distance of about a hundred yards, we were welcomed, much to our delight, by several Waxwings flying from the shore. For the most part they flew directly towards the boat, then circled back to the island, apparently much alarmed at our presence. While on the wing the birds uttered a short succession of high-pitched, screaming notes, closely resembling in character, though not in volume, the cries heard on nearing a Pigeon Guillemot rookery on the seacoast. As soon as we landed most of the birds flew to an adjacent island. Only one pair remained, these being in full view about fifty yards distant, perched near the top of a small spruce tree. After a search of about fifteen minutes we found the nest, resting on two small horizontal branches, close to the trunk of a spruce tree, twelve



Fig. 50. NEST AND EGGS OF THE BOHEMIAN WAXWING, TAKEN AT ATLIN LAKE, BRITISH COLUMBIA. "NEST NO. 2"; PLACED ON THE OUTER BRANCH OF A SPRUCE TREE.

feet from the ground. It contained two eggs. Both the nest and eggs being carefully packed, together with the birds, which we had shot, we continued to search the island for other nests. We failed to locate any, however, save an old Waxwing nest near the top of a small spruce tree, about fifteen feet up.

Anxious to visit the neighboring island, we gathered our spoils and proceeded to its nearby shore. Shortly after climbing up the rocky bluff, three pairs of Waxwings were located perched on tree tops. This island being of larger size than the first one visited, and being also more thickly timbered, a thorough and careful search was necessary to find their homes. By watching the birds' movements, and closely scanning every tree from top to bottom,

we were rewarded, after about an hour's search, with all three nests, each containing a complete set of perfectly fresh eggs. Still eager to learn if any more bred in the vicinity, several other islands of various sizes were visited, but no more of the birds were seen. While travelling back to camp, a single individual flew along the shore of Atlin Lake, but as it was growing late in the evening it was not deemed advisable to land and search for the nest.

It seems highly probable that if other sections had been traversed as carefully, additional nests of this species would have been found. Areas similar to those visited are to be found over practically the whole extent of Atlin Lake, which ranges north and south for almost one hundred miles, the width

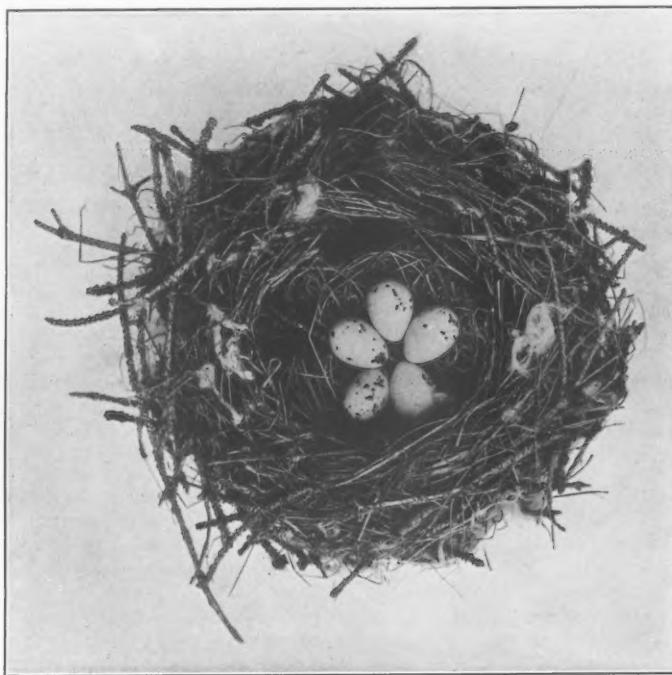


Fig. 51. NEST AND EGGS OF THE BOHEMIAN WAXWING, TAKEN AT ATLIN LAKE, BRITISH COLUMBIA. "NEST NO. 4", BUILT CLOSE TO TREE TRUNK.

varying from two to ten miles.

Unfortunately the photographs of the nests taken in the field were failures, the accompanying figures being from the specimens as they are at the Museum. These I hope will at least give a general idea of the appearance of the nest and eggs of the Bohemian Waxwing.

Following are detailed descriptions of the several nests and eggs. All were collected near Atlin, British Columbia, on July 8, 1914. Egg measurements are given in millimeters. The colors are according to Ridgway's *Color Standards and Nomenclature*.

Nest no. 1. The first nest found was saddled on two small horizontal

limbs of a spruce tree, the latter about twenty-five feet high, and with the trunk ten inches in diameter at the base. The nest was placed close to the trunk, at an elevation of twelve feet. It was composed outwardly of dried spruce and pine twigs, interwoven with dried grasses and cottonwood down. The lining consisted chiefly of finer grasses, with the inner walls scantily padded with dry bearded moss of a dark brownish color. The nest measures $7\frac{1}{2}$ inches in width, and $2\frac{1}{2}$ inches in depth, with a cavity of $3\frac{1}{4}$ inches across the top, and $1\frac{3}{4}$ inches deep. The eggs, two in number, are both of a pearl grayish ground color, with a few faint pale blue markings, and with conspicuous spots of various shapes, of bluish slaty black, intermixed with a few clay colored spots. The eggs measure: 24x17.3 and 24.2x17.5.

Nest no. 2. This nest was well hidden on an outer branch of a spruce tree about eighteen feet above the ground. Of the four nests taken, this was the only one not placed against the tree trunk. It is similar to number one, both in size and structure. The eggs, five in number, were perfectly fresh. They are of the usual pearl grayish color, with small spots of bluish slaty black and of pale blue, with the clay colored spots almost lacking. The eggs measure: 22x17, 22x17, 22x17.3, 22.5x17.2, 22x17. (See fig. 50.)

Nest no. 3. Situated in a small spruce tree, eighteen feet up, and placed against the tree trunk. Nest similar to number one, both in structure and measurements. The nest contained four fresh eggs of a pearl gray color, spotted with bluish slaty black, pale blue, and clay colored markings, mostly toward the larger end. The eggs measure: 24x17, 23x17, 23.5x17, 23.3x17.

Nest no. 4. This nest was situated close to the trunk of a small slender spruce tree, fifteen feet up. It is similar to number one, differing only in having a scant lining of white fur of the Northern Hare (*Lepus americanus macfarlanei*). The nest contained five fresh eggs, of a pearl grayish color, spotted and blotched with blue slate, and with obscure pale blue markings, mostly toward the larger end. This set is not marked as heavily as any of the others. The eggs measure: 24.5x17.3, 25x17.3, 24.5x17, 25x17.5, 25x17. (See fig. 51.)

Victoria, British Columbia, Canada, April 20, 1915.

NOTES ON SOME BIRDS OF SPRING CANYON, COLORADO

By W. L. BURNETT

SPRING CANYON is a small opening in the first range of foothills seven miles southwest of Fort Collins. Viewing it from the standpoint of a mammalogist, this canyon has always been an interesting spot to me. While no systematic study of the birds found in this vicinity has been made by me, the following notes have been picked up from time to time. A half day or day now and then has been spent at the canyon, with the collection of small mammals the main object of the trips. Of such specimens we have taken some twenty species or subspecies, in the canyon proper and just outside. The place was named from a large spring that in years past flowed just at the entrance of the canyon, in early days a favorite camping spot for emigrants, as the old California trail ran nearby. Several years ago, a mighty flood rushed

down the canyon and destroyed the spring, so that it has not flowed since. The flood, to some extent, ruined the beauty of the canyon, for huge blocks of sand-stone were washed down from the side walls. One of these was moved about fifty yards, and weighed several tons. The canyon proper is about one-half mile through. The Auto Stage road to the famous Estes Park now runs through the canyon, which is the first bit of rugged scenery the eastern tourist sees after leaving Fort Collins.

These bird notes were taken in the canyon, and on the two quarter sections lying just outside on the plains. On both sides of the road, including the canyon, is the Dawley ranch, joined on the east by the Berry ranch. On the south side of the road is a pasture of native grass, with a small reservoir which is filled with flood water. In dry seasons this has little or no water in it, therefore water birds are scarce.

There is a small stream, known as Spring Creek, flowing through the canyon, taking a northeasterly course past the Berry house, which stands about three hundred yards outside. Along this stream, between the canyon and the Berry house, is a small growth of cotton-wood (*Populus angustifolia*) and willow (*Salix*, sp. ?), and underbrush of various kinds, including wild plum (*Prunus melanocarpa*), choke-cherry (*Prunus pensylvanica*), mountain maple (*Acer glabrum*), wild goose-berry (*Ribes purpusi*), black currant (*Ribes floridum* ?), haws (*Crataegus occidentalis*), wild rose (*Rosa sayi*), etc.

On the walls of the canyon is found yellow pine (*Pinus scopulorum*) and cedar (*Sabina scopulorum*). As this is the only timber and underbrush to speak of between the Big Thompson river to the south, and the Cache La Poudre river to the north, it is a favorite spot for birds, especially so in migration. Along Spring Creek on the Dawley ranch is some back water and a small patch of swampy ground, but not enough to be of much attraction to the birds usually found at such places.

Through the courtesy of the Dawleys and Berrys, I have had the privilege of shooting, trapping, and building campfires on both places, and in a way making myself a general nuisance. Mr. Berry, while not an ornithologist, is a keen observer, and familiar with most of the common birds of the region, and he has been of assistance to me in locating nests, etc. The dates on spring migration, as given in this list of birds, are averages compiled from records kept for several years for me by Mr. Berry. The dates following the word "breeds" are those on which full sets of eggs have been found.

Rallus virginianus. Virginia Rail. Uncommon; breeds (May 30).

Oxyechus vociferus. Killdeer. Common in the canyon and out. Arrives March 10; breeds (June 2).

Zenaidura macroura carolinensis. Mourning Dove. Common. Arrives April 15; breeds (May 29). We have two winter records for this bird, January 15, 1901, and November 24, 1903.

Cathartes aura septentrionalis. Turkey Vulture. Not common; one taken in the spring of 1902.

Accipiter velox. Sharp-shinned Hawk. Not uncommon. One taken in the canyon April 13.

Buteo borealis calurus. Western Red-tail. Common in migration.

Falco columbarius columbarius. Pigeon Hawk. Not common. Two specimens taken on the Berry ranch, September 9 and 18.

Falco sparverius sparverius. Sparrow Hawk. Common; breeds (May 21). Arrives April 28.

Asio wilsonianus. Long-eared Owl. One or two seen almost every trip made to the canyon. No doubt breeds, but we have no record.

Cryptoglaux acadica acadica. Saw-whet Owl. Rare. One found dead in the road near the Berry house.

Coccyzus americanus occidentalis. California Cuckoo. Not uncommon, several specimens having been taken; breeds (June 16).

Coccyzus erythrophthalmus. Black-billed Cuckoo. Rare, but one specimen having been taken.

Melanerpes erythrocephalus. Red-headed Woodpecker. Common; arrives May 20. Breeds (June 19). Mr. Berry has a small cherry orchard on his place, and these woodpeckers keep him busy at cherry time, trying to get his share of the fruit.

Colaptes cafer collaris. Red-shafted Flicker. A common resident; breeds (May 13). We have in the college collection a Flicker skin taken at the canyon, that is a hybrid between *cafer* and *auratus*.

Aeronautes melanoleucus. White-throated Swift. Common, several have been taken in the canyon. No doubt they breed there, but we have no record.

Tyrannus tyrannus. Kingbird. Common. Arrives May 10; breeds (June 6).

Tyrannus verticalis. Arkansas Kingbird. Common; arrives May 8.

Sayornis sayus. Say Phoebe. Common. Arrives April 5; breeds (May 15). Mr. Berry had in his workshop a hawk, mounted with spreading wings. Through the open window of this shop, a pair of Phoebes entered and built a nest on the back of this mounted hawk, between the outspread wings.

Myiochanes richardsoni richardsoni. Western Wood Pewee. Common. Arrives May 16; breeds (June 26).

Pica pica hudsonia. Magpie. Common; breeds (May 6).

Cyanocitta stelleri diademata. Long-crested Jay. Common in winter, but uncommon in summer. Berry found a nest of this jay in a pine tree, high up on the north canyon wall.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Not uncommon. Arrives April 10; breeds (May 29).

Agelaius phoeniceus phoeniceus. Red-winged Blackbird. Common; breeds (May 15).

Sturnella neglecta. Western Meadowlark. Common; breeds (May 29).

Icterus bullocki. Bullock Oriole. Common. Arrives May 9; breeds (June 7).

Euphagus cyanocephalus. Brewer Blackbird. A common summer resident. We have no record of its breeding in the canyon.

Carpodacus mexicanus frontalis. House Finch. Common; breeds (May 5).

Leucosticte tephrocotis tephrocotis. Gray-crowned Rosy Finch. Not uncommon in winter. There are several specimens in the college museum taken at the canyon.

Melospiza lincolni. Lincoln Sparrow. Not uncommon. There is a mounted bird in the college museum taken at the canyon.

Pipilo maculatus montanus. Spurred Towhee. Common; arrives April 25. The walls of the canyon are covered with a thick growth of underbrush, a condition dear to the hearts of the towhees, and as they skulk through this underbrush, the canyon walls echo with their harsh call-notes.

Oreospiza chlorura. Green-tailed Towhee. One of the common birds of the canyon.

Zamelodia melanocephala. Black-headed Grosbeak. Common. Arrives May 8; breeds (June 20).

Calamospiza melanocorys. Lark Bunting. This is one of my favorite birds. A common summer resident, nesting in the alfalfa fields. Arrives May 20; breeds (June 6).

Piranga ludoviciana. Western Tanager. Not uncommon in migration. Arrives May 14.

Petrochelidon lunifrons lunifrons. Cliff Swallow. Common. Arrives May 13; breeds (June 25).

Hirundo erythrogaster. Barn Swallow. Common. Arrives May 9; breeds (July 22).

Stelgidopteryx serripennis. Rough-winged Swallow. Five or six pairs found nesting June 27 in the bank along Spring Creek.

Lanius ludovicianus excubitorides. White-rumped Shrike. Not uncommon. Arrives April 25; breeds (May 29).

Vireosylva gilva gilva. Eastern Warbling Vireo. One of the common birds among the cotton-woods.

Dendroica aestiva aestiva. Yellow Warbler. One of the common warblers. Arrives May 8; breeds (June 1).

Dendroica auduboni auduboni. Audubon Warbler. The commonest warbler during migration. Arrives April 17.

Seiurus noveboracensis notabilis. Grinnell Water-thrush. One specimen in the college museum, taken in the canyon.

Oporornis tolmiei. Macgillivray Warbler. One of the common warblers of the canyon. We have no record of its breeding.

Geothlypis trichas occidentalis. Western Yellow-throat. Abundant.

Icteria virens longicauda. Long-tailed Chat. Not uncommon. We have no data on its spring arrival. Berry found it nesting, but failed to record the date.

Wilsonia pusilla pileolata. Pileolated Warbler. Common in migration.

Setophaga ruticilla. Redstart. Not uncommon.

Mimus polyglottos leucomelas. Western Mockingbird. Not uncommon; arrives May 9. No doubt breeds, but we have no record of it.

Dumetella carolinensis. Catbird. Common. Arrives May 13; breeds (June 22).

Toxostoma rufum. Brown Thrasher. Common. Arrives May 13; breeds (June 19).

Salpinctes obsoletus obsoletus. Rock Wren. Common on the rocky walls of the canyon. A full set of eggs was taken from a hole in a sandstone ledge, June 7.

Hylocichla fuscescens salicicola. Willow Thrush. Rare. Only one record, a mounted specimen in the college museum, taken at the canyon in 1902.

Hylocichla ustulata swainsoni. Olive-backed Thrush. Common in migration.

Planesticus migratorius propinquus. Western Robin. Common. Arrives March 5; breeds (May 28).

Sialia currucoides. Mountain Bluebird. Arrives February 25; breeds (June 16).

Colorado Agricultural College, May 1, 1915.

WOODPECKERS OF THE ARIZONA LOWLANDS

By M. FRENCH GILMAN

WITH TEN PHOTOS BY THE AUTHOR

THE TERRITORY covered by these notes is a strip of country about three miles wide, on each side of the Gila River, extending from Blackwater at the east, to Casa Blanca and Snaketown on the west. Except for species peculiarly adapted to life on the desert, the country is anything but a wood-pecker's paradise. Mesquite and ironwood, comprising the bulk of the timber, probably make hard pecking, and except along the river bottoms there is not much growth suitable for the birds. Of the eight species of woodpeckers to be mentioned, only two can be called abundant, but these two make up for the lack of numbers of the others.

The Cactus Woodpecker (*Dryobates scalaris cactophilus*) may be seen in limited numbers at all times of the year. It is seemingly at home in any location, in the open country working on the various species of cactus (*Opuntia*); in dense mesquite and screw-bean thickets; or in cottonwood and willow groves. The nest holes are made in any suitable tree or shrub, and average about 1.55 inches in diameter, with depth of six to eight inches. I have seen the nests in mesquite, screw-bean, ironwood, cottonwood, willow, palo verde, and cholla cactus (*Opuntia fulgida*). They may nest in the giant cactus also, but I have never found them there. The height of the nest varies from two feet to twenty or more, and the holes are excavated in dead or dying wood, though occasionally part of the hole may extend into green wood.

The Sierra Sapsucker (*Sphyrapicus varius daggetti* = *S. ruber ruber* of the A. O. U. *Check-List*) is a rare visitor to this locality, and I have seen only three. February 9, 1910, a female was secured, October 5, 1910, a male taken, and October 5, 1914, another one seen but not secured. All three were in cottonwood trees, where some of the characteristic drawn-work was seen.

The Red-naped Sapsucker (*Sphyrapicus varius nuchalis*) is a winter visitor along the Gila River, and while not to be called abundant, it is frequently noticed. I have seen individuals from October 6 to as late as April 17, and in all the months between these two dates. Once I saw three in one mesquite tree. Signs of their work are frequently present on cottonwood and willow trees and occasionally on an Arizona ash. If there are any almond trees in the country they are sure to be attacked, as they are favorites with these birds. Only once or twice have I seen mesquite trees attacked.

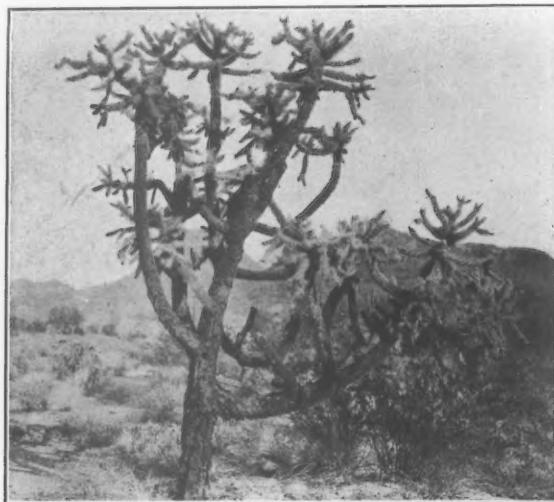


Fig. 52. NEST HOLE OF CACTUS WOODPECKER IN TRUNK OF CHOLLA CACTUS.

The Mearns or Ant-eating Woodpecker (*Melanerpes formicivorus aculeatus*) may be termed a rare visitor to the Pima Reservation as I have seen only three of them during a stay of seven and a half years. May 22, 1908, I saw one at Casa Blanca, a few miles west of Sacaton; September 5, 1910, I secured one at Sacaton, at work on a mesquite woodpile in a back yard; and December 7, 1914, I saw one at Santan, on the north side of the Gila River.

The Lewis Woodpecker (*Asyndesmus lewisi*) is another rare visitor, and I have noted only two during the time spent at Sacaton and Santan. One was seen a few miles from Sacaton on October 6, 1910; and one was secured at Sacaton November 13, 1910, while he was at work on fruit in a late pear tree.

Were it not for the Gila Woodpecker (*Centurus uropygialis*) what would become of the several species of birds that use already prepared cavities for their domiciles? In some cases these tenants do not even await the pleasure

of the excavators, but take forcible possession. In holes excavated by Gila Woodpeckers there may regularly be found nesting the Elf Owl, Ferruginous Pigmy Owl, Ash-throated Flycatcher, and Arizona Crested Flycatcher. Occasionally a Cactus Wren makes use of the handy hollow, and once I saw one occupied by the nest of a Lucy Warbler. A big "rough-neck" scaly lizard frequents the holes when not too high in the cactus, and in two holes in willow trees I found snakes. It is not pleasant to insert one's hand and have a big lizard or snake crawl up the arm to escape. Rats and mice are sometimes found in the deserted holes, especially if the tree be much decayed and with cracks and hollows connecting holes at different heights in the tree or branch. So these woodpeckers may be considered among the class of innocent or unintentional benefactors.

As a neighbor, the Gila Woodpecker is permanently on the map, and is afraid neither of being seen nor heard. He is much in the public ear with a variety of notes and calls. His sociable conversational notes somewhat resem-



Fig. 53. PIMA INDIAN CABIN, WITH STORE OF CORN ON THE ROOF. A TREASURE TROVE FOR THE GILA WOODPECKER.

ble those of the California Woodpecker but are shriller. In such of his notes as are directed at humanity there is a peevish complaining tone, especially if closely approached when feeding on fruit or some other delicacy. In such cases there is only one term that exactly describes his attitude and utterances, and that is the phrase "belly-aching". In fact all of his talk at us has a distinctly "colicky" tone and one feels like giving him something to whine about. His ordinary call slightly resembles that of the Flicker but is not quite so loud; altogether he is quite a conversationalist.

This woodpecker frequents houses and yards, and with slight encouragement comes regularly for food, not hesitating to call loudly for it if breakfast be much delayed. The Indians store corn in the ear on the flat tops of their houses and sheds (see fig. 53), and each home has one or more of woodpecker retainers or pensioners hanging about most of the time. This corn provides an abundant and sure source of food, and the birds make the most of it. I have never seen any indication of food-storage on the part of the Gila Wood-

pecker, as with the California Woodpecker, for they live in a claw-to-beak fashion. They peck at a kernel until it comes off the cob, when it is carried to a post or tree and placed firmly in a crack. Here it is pecked to pieces and eaten. They seem never to swallow the kernel whole but always break it up. They seem to be allotted on the ratio of a pair of birds to a home, and it is but rarely that more than two are seen at the same cornerib. During the breeding season they are shyer and are not seen around the homes very much; but when the young are grown they "bring them out" and present them as it were.

The food of this woodpecker is varied, nearly everything being grist that comes to his mill. He pecks around decayed and dying trees as well as green ones, and presumably get the insects usually found and eaten by such birds. The giant cactus is pecked into very frequently, and I believe some of the pulp is eaten. The small punctures made are not enlarged, and in some cases quite an area is bitten into. The fruit of the giant cactus is eaten as long as it lasts, and berries of the *Lycium* are also freely eaten. The Gila Woodpecker frequents corn fields, and pecks through the husks into the ears of corn. The

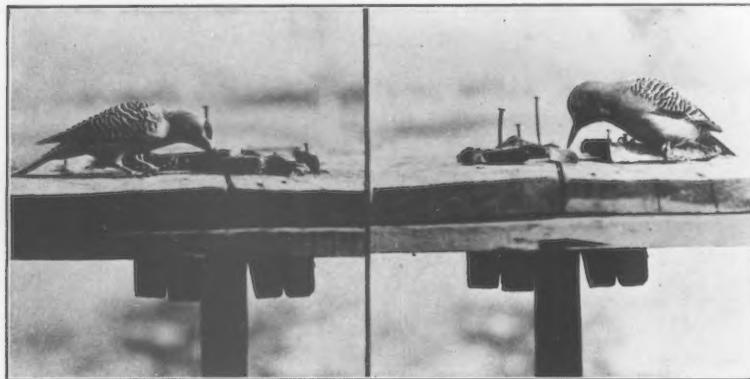


Fig. 54. ADULT GILA WOODPECKER AT WORK ON T-BONE STEAK.

birds may peck in at first to get a worm, but it is a case similar to the discovery of roast pig as portrayed by Lamb. They alight on the ground and feed upon table scraps thrown to chickens, three of them being regular morning visitors, star boarders, to a pen of chickens I fed. They are very fond of peaches and pears, and volubly resent being driven from a tree of the fruit. They peck holes in ripening pomegranates and then the green fruit beetle helps finish the fruit. They relish grapes, both white and colored, and will spear one with their bill and carry it to a convenient crevice where it may be eaten at leisure. On bird-tables I have tried them with various articles of food and found very little that they rejected. They would not eat cantaloupe at all but were regular watermelon fiends, eating it three times a day and calling for more. They did not care for oranges, and I had no success in trying to teach them to eat ripe pickled olives. I tried the olive diet on them because two Mocking-birds in our yard in California learned to eat this fruit. Meat, raw and cooked, was eaten, and they ate suet greedily. Their favorite cut of beef was the T-bone steak and we always left some meat on the bone for them.

They picked it clean, and if a new supply was slow in coming the softer parts of the bone were devoured. This T-bone steak diet, however, was prior to the balloon ascension of beef. The bone was always nailed fast to the table and it furnished the birds with food and exercise, and us with edification. Mr. Frank Pinkley, custodian at the Casa Grande Ruins told me of a pair of these woodpeckers that stayed around his home and became quite tame, coming into the shed to drink from a can of water. He said they got into the habit of sucking the eggs in the chicken house, or at least pecking into them and eating of the contents. As the eggs were from blooded Wyandot hens he had to break the woodpeckers of the habit. I did not ask him how he did it, but fear that it was in the same way that he broke some Horned Owls of dining on the same brand of hens. Water seems to be the least of their worries; perhaps it is supplied by the giant cactus they peck into so freely.

This woodpecker has not the best disposition in the world, for he is very quarrelsome and intolerant. He fights his own kin and all the neighbors that

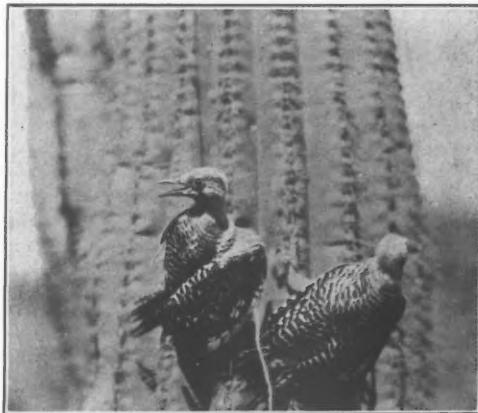


Fig. 55. YOUNG GILA WOODPECKERS CLINGING TO SIDE OF SAGUARO.

he dares. He, or she, is a great bluffer however and when "called", frequently side-steps, subsides, or backs out entirely. I saw one approach a Bendire Thrasher that was eating, and suddenly pounce on him. He had the thrasher down and I was thinking of offering my friendly services as a board of arbitration, when the under bird crawled from beneath and soon gave the woodpecker the thrashing of his career. Several times I have seen the woodpeckers start to attack Bendire and Palmer thrashers, but they were always bluffed or beaten at the game. With the Bronzed Cowbirds it is a drawn battle, sometimes one and then the other backing down. Most other birds, such as Cardinals, Abert Towhees, Dwarf Cowbirds and Cactus Wrens do not attempt to assert their rights, but always take a rear seat. When it is woodpecker versus woodpecker it seems not to be a case of "Thrice armed is he who hath his quarrel just", but rather, "Four times he who gets his blow in fust".

I had two bird tables about twenty feet apart, and frequently one woodpecker might be peacefully assimilating watermelon, when another one would

come hurrying up and make a dive at him, causing a retreat to the other table. Frequently the new-comer would then follow and drive him from the second table. He seemingly would rather fight than eat if another one was eating at the same time. One day I saw him, or her, I forget which, hanging to the edge of the table busily eating steak, when another one perched on the table and made a vicious stab at him. He dodged backward clear under the table, though retaining his hold, and then bobbed up again, just like the Punch and Judy show.

Judy show. The attack was renewed, and the dodging as well, but this time he did not "come back". Another day one of them was at work on a piece of melon when one of his fellows came and perched on the end of the table. The diner made a pass at the new comer, and seizing him by the feathers of the neck held him suspended over the end of the table for a few seconds.

Nesting sites in this locality are restricted to giant cactus (*Cereus giganteus*), cottonwood and willow, as they are the only suitable material for a nest excavation. More nests are found in the giant cactus, as these plants are more numerous than the others, and more "peckable", though the willows and cottonwoods along the river and the canals are well patronized when sufficiently decayed. Of the nests I examined I should say that fifty per cent were in the cactus, and the rest equally divided between the other trees mentioned. I say *examined*, advisedly as I saw many holes in the giant cactus that I did



Fig. 56. NEST AND SET OF FIVE EGGS OF GILA WOODPECKER, IN SAGUARO, OR GIANT CACTUS. A PORTION OF THE TRUNK HAS BEEN CUT AWAY SO AS TO SHOW A VERTICAL SECTION OF THE NEST CAVITY.

not climb to. My ladder was only fourteen feet long and while I have "shinned up" a cactus several feet beyond the end of my ladder it was done only on special occasions. Life is too short and time too precious to spend any great portion of it digging thorns from the flesh.

As to the size of the holes in the cactus as compared with those in cottonwood and willow, I found no appreciable difference. I expected the holes in the cactus to average a little larger owing to possible greater ease in excavat-

ing but the difference was too slight to be sure of in measuring. Of eighteen holes measured, the average diameter was 1.95 inches; the largest was 2.25 inches and the smallest 1.87 inches. The deepest hole was 16 inches, with the entrance 2 inches in diameter. The shallowest one was 9 inches, with entrance a little less than 2 inches in diameter. The average depth of holes measured was a little more than 12 inches. Many of the holes were not exactly circular, there being a difference of from $\frac{1}{8}$ to nearly $\frac{1}{2}$ inch between the long and the short diameter if it be allowable to use the term in that way. Usually the nest hole runs straight in for a short distance before turning downward, the distance seemingly depending on the texture of the wood. In one case the hole went straight back for nine inches before turning downward. It was in a big cottonwood stump, and the bird excavated horizontally until decayed wood was reached, when the hole turned downward. This was an extreme case, as the depth horizontally is usually about three inches. In the giant cactus it varies according to the diameter of the trunk, the smaller the trunk the less distance before turning downward. The softness of the material is not a factor as it is the same in small and large trunks. In only two cases have I found nest holes that penetrated through the ribs of the cactus into the inner pith. In both cases the trunk was too small to furnish room for the nest between the outside and the ribs. The holes are dug in the soft pulp of the cactus, and the raw surface becomes calloused, as it were, forming a tough woody lining to the hole, which persists when the rest of the pulp decays. In this way the nest holes may be found intact, the hole being outlined by the hardened pulp, while the surround-



Fig. 57. NEST CAVITY OF GILA WOODPECKER, FROM GIANT CACTUS TRUNK, SHOWING THE HARDENED LINING REMOVED FROM THE PULPY STALK.

ing pulpy tissues have entirely decayed. An example of this is shown in the accompanying illustration (see fig. 57).

The nests were placed at different heights, those in the giant cactus ranging from fourteen feet to the limit of the plant, about thirty-five feet. As my ladder was only fourteen feet long the nests higher than twenty feet were inaccessible, except in the special cases already mentioned. Many of the nests seen were more than twenty feet from the ground, and as a rule the Gila Woodpecker seemed to place the nests higher in the cactus than did the Gilded Flicker. They appear to select large plants, and to patronize the same one for several years, as many unoccupied holes may be seen in it. Unoccupied, that is, as far as the woodpecker is concerned for the old holes are often used by other birds. I have never found two of these woodpeckers occupying the same tree, but frequently a Gilded Flicker, Elf Owl, and Ash-throated Flycatcher might be next door neighbors, and all housed under the same roof, as it were. In cottonwoods and willows there could not be so much choice as to height, for the site was decided by the location of soft or decayed wood, and sometimes the nest would be closer to the ground. In some stumps I have found the nests only five feet from the ground, in other cases as high as thirty feet or more.

The same nest hole is used more than one season, both in cactus and other locations. In 1913 I found a nest in a big cottonwood stump containing young. The next year it had young again, and I cut into it to measure the hole and count them. The entrance was on the slanting under side of the tree. This was the beforementioned hole that went in nine inches before turning downward, and it was quite a task to get at the bottom of the sixteen inch hole by enlarging the two inch entrance.

The height of the nesting season is evidently from the middle of April to the middle of May. Of thirteen occupied nests examined, twelve were found in May, eight of them containing young. May 10 was the latest date that eggs were found. July 10 I found three young about half grown, which might indicate that a second brood was sometimes raised. The number of eggs to a set is from three to five, with the odds on three. Seven of the thirteen nests contained three eggs or three young. The number of young in a nest, however, is not a sure indication of the number of eggs laid, as often some of them fail to hatch. Two sets of five eggs each were found, and two of three. Five nests had three young each, and one had four young; one nest had three young and two eggs; another three young and one egg; while another had one young. The average number to the nest, including eggs and young, was 3.46 but I believe a census taken early enough to count the eggs before they hatched would show a larger average.

It is not easy to determine just what food the young in the nest are given, but insects play a prominent part, as I have seen them frequently carried to the young. Fruit is also used, as I watched one parent carry ripe *Lycium* berries several times to the nest; after emerging from the hole she would halt at the entrance each time and "lick her chops".

The old birds show much concern when the nest is approached, and remonstrate most volubly; if the young are handled and caused to cry, the old ones use terrible language. The birds are not very close sitters as a rule, but I cut into one nest without seeing any owner around and found her on the nest with three young just hatched and one egg pipped. She was not sick or stupid either, judging from the noise she made and the fight she put up, but was

merely on the job, and surely "on the peck". A new-looking hole in a cottonwood stump only five feet from the ground was noticed, and quietly approaching, I placed my fingers over the entrance. I soon received a vigorous peck from the lady of the house who was "coming up" with a mouth full of sawdust. I took her by the chin and drew her as gently as possible from the hole, but after petting her awhile, released her, for she made more noise than a sitting hen. Mr. Pinkley at the Casa Grande Ruins showed me a giant cactus that had been moved to their yard from a distance of a quarter of a mile. The cactus at the time of removal contained a nest of young woodpeckers, and the mother followed it up and raised the family to maturity, with exception of one youngster that became impaled on a thorn at the entrance to the nest.

The young are fed by the parents for a long time after leaving the nest, and they are regular little beggars. One pair stayed around our house for several months, and became quite tame. They were missed during the breeding season but soon came back with three youngsters to share the good things found on the bird tables in the yard. The young, although as large as their parents, would flutter their wings and sit with open beak as though the old ones told them to "open your mouth and shut your eyes", etc. The old ones would try to get them to eat watermelon placed on the tables, but the babies would not be shown; the parents had to put it in their mouths. They followed the parents from perch to perch, begging for food until I expected to see them chastised. The pair in question stayed with the three juveniles until they had them broken to eat for themselves, and then left. After a proper interval they came back with two more young ones, thus indicating that a second brood is sometimes raised. The abundant supply of food may have been a determining factor in the number of broods raised.

The Gila Woodpecker is so prone to adapt himself to different kinds of food that he seems fitted to persist in the face of settlement and civilization. Lack of suitable nesting sites might be thought to prove a stumbling block, but any old stump appears to answer, no matter whether high or low, so that difficulty might be surmounted. He might prove a pest to certain fruits if present in sufficient numbers, but that danger is remote, though I have known several to suffer through too much devotion to the succulent peach and pear.

The Red-shafted Flicker (*Colaptes cafer collaris*) spends the fall, winter, and the early spring months in this neighborhood but is absent during the breeding season. He usually appears the first week in September, the earliest



Fig. 58. YOUNG MOCKINGBIRD AND GILA WOODPECKER QUARRELING OVER A SLICE OF WATER-MELON.

date I have recorded being September 4th. Most of the birds leave for their breeding grounds about the first of April, though I have recorded them as late as April 15. They sometimes join the Gila Woodpeckers in feeding on the stored corn on the roofs of the Indian homes.

Mearns Gilded Flicker (*Colaptes chrysoides mearnsi*) is abundant throughout this region, and is found in cottonwood and willow groves as well as wherever the giant cactus grows. The giant cactus is to this Flicker and the Gila Woodpecker, what the bamboo is to the inhabitants of some of the eastern islands. The cactus could get along without the flickers, though it probably would not feel properly ventilated without a few nest holes, and it would not look at all natural without them. The cactus furnishes the birds with home, shelter, food and possibly drink. They roost in the holes and seek them as retreat from rain storms. More than once when driving through a heavy rain have I seen a flicker's head thrust from a hole in an inquiring way as though to say "look who's here".

The Gilded Flickers are much quieter than the Gilas, and are not so much in evidence around homes, though they do not appear to be very timid. They are simply less sociable I presume. They resort regularly to the Indian corn-cribs and are seen in corn fields though I have never noticed them actually engaged on an ear of green corn as I have the Gilas. They probably attack the green corn but are quiet about the work instead of advertising their presence. They eat largely of the cactus fruit and possibly of the pulp at certain lean seasons. They are very fond of watermelon, and eat freely of it when it is placed on bird tables or on the ground in shade of tree or shed. They appear to feed frequently on the ground in the way the Red-shafted does, and are probably after ants most of the time. I have seen them at work on an ant hill and even pecking into the ground after the insects. When melon is placed both on the tables and on the ground, they resort more often to that on the ground while the Gilas prefer the tables. However, I have never seen the flickers drink from the pool of water provided, though the Gilas occasionally do.

They are peaceable and impress me as being eminently practical and matter of fact. Each one minds his own business and seems willing to live and let live. They do not assemble in numbers as the Gilas do sometimes, but are solitary or in pairs. They have the same habit of pecking the walls of buildings as have the Red-shafted Flickers, and one has worked spasmodically at the shingled gable of the school house here for the past three years. I take it to be the same individual, for he is rather tame and roosts each night above one of the window casings. A few times I have seen a Gila Woodpecker at work at the same point in the wall but usually his time is put in on a telephone pole in the yard. The notes of this flicker are quite similar to those of the Red-shafted, but not so frequent nor quite so loud.

The nests are found in giant cactus, cottonwood and willow, and in that order as to frequency, the giant cactus leading. Nests are in the giant cactus or Saguaro as it is called, far from water, and in cottonwood and willow along the river, on banks of the canals, or even standing in stagnant water pools. Of twenty-seven nests examined, containing eggs or young, twenty-one were in the Saguaro, four in willow, and two in cottonwood. Others were seen in cottonwood but too difficult of access, and many in the cactus were out of reach. If careful count were made I believe about ninety per cent would be found in the cactus. Nests in cottonwood and willow ranged from five to twenty-five

feet from the ground, and in Saguaros from eleven to twenty-five or thirty feet.

April is the month for Flicker nesting, as nineteen of the twenty-seven occupied nests were noted during that month. Eleven contained eggs, and eight had young. Of eight nests found in May, four had eggs and four contained young. April 11 was the earliest date for a complete set, and April 19 date of first young found. May 17 was the latest date of nest with eggs.

The number of eggs in a set varies, and it is hard to determine just what constitutes the average set. The number of infertile eggs seems to be quite large, and unless the nest is investigated before hatching or soon after, the count of young is not a correct indication of the number of eggs laid. In two cases I have seen one and two infertile eggs in a set before hatching, and a visit shortly afterwards showed the young all right but no sign of the infertile eggs. The eggs that fail to hatch are often broken, as the nest odor would indicate; at times they must be removed bodily as no odor or shells are in evidence. Occasionally an infertile egg is seen in the nest when the young are about ready to leave, showing in such cases neither accident nor removal. Of the twenty-seven nests examined, eight had five eggs, or young plus eggs, to



Fig. 59. YOUNG GILDED FLICKERS AT BASE OF SAGUARO.

make count of five for the set; eleven had four eggs or young, or young plus eggs; six nests contained three eggs or three young; and two nests had two young each. In no case did I find five young in a nest, and from the fact that infertile eggs were found with three and four young in a nest, it may be inferred that in many of the nests containing two, three or four young, more eggs had been laid. In no nest did I find more than five eggs, and I conclude that the set is from three to five eggs. From the data mentioned it would seem the average number in a set was 3.92 but deducting the two nests containing two young each, the average would be slightly more than four, which I believe somewhere near right.

The entrance to the nest holes varies much, as may be seen from the figures given. The smallest entrance measured $2\frac{3}{4}$ inches and the largest $4\frac{3}{4}$ inches. The shallowest hole was ten inches, and the deepest eighteen inches. The average diameter of entrance to thirty-six holes measured was 3.28 inches, and average depth of same holes was 12.75 inches. The entrance to the eighteen inch hole was three and one-half inches in diameter, and while the ratio is not constant, the shallower holes tend to have smaller entrances, and the

deeper holes have larger entrances. It was difficult to measure the diameter of the bottom of the nest holes without destroying the nest, and this was not to be considered when the hole was occupied, so very little data was secured. From the few measurements taken it may be stated that the bottom of the nest hole is from four and one-half to six inches in diameter. It is hardly correct to use the term diameter, as many of the hole bottoms were not nearly circular, one I measured being four inches one way and six the other. This variation seemed to be governed by the size of the cactus, as in the smaller plants there was not room to excavate a large circular bottom, and it had to be stretched one way. How the four young find growing room in some of the nests is a puzzle; I have never been able to fit them back when once removed, unless it was done soon after they hatched.

The Gilded Flickers do not object to using a hole after the entrance is enlarged. Two years ago I cut into a hole occupied by a Gila Woodpecker, and the following season a Flicker used it. In the same tree at the same time, I

cut into a Flicker's nest, and the following year a Sparrow Hawk occupied it with four eggs.

While speaking of Gila Woodpeckers I mentioned catching one at work excavating a hole in a stump. A short time afterwards I examined the hole and found a Gilded Flicker at home there with three tiny young and two infertile eggs. She had taken the hole and enlarged it sufficiently to accommodate her family.

The young when first hatched are not very prepossessing to any one, except perhaps the parents. At first glance they remind one of

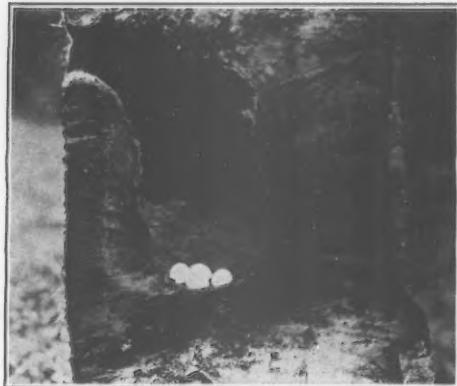


Fig. 60. NEST AND SET OF FOUR EGGS OF GILDED FLICKER IN SAGUARO. A PORTION OF THE TRUNK HAS BEEN CUT AWAY, EXPOSING THE NEST CAVITY.

the pictured restoration of the Plesiosaurus, with their long twisting naked necks. The lower mandible was more than an eighth of an inch longer than the upper, and on the tip of each was the hard white growth used in opening the shell. At this nest the parents showed more solicitude than any others I had seen, coming as close as four feet from me. In most instances they are rather indifferent, even when the young loudly protest at being handled. One nest examined contained four nearly grown. When disturbed one of them flew from the nest and landed about one hundred yards distant, coming to the ground very awkwardly but flying as well as though he were a graduate from a school of aviation. Two others then left the nest, but made only short flights. I caught and tried to keep them still enough for a photo, but did not have enough hands to hold them still and operate the camera. They made enough noise to attract attention but neither parent put in appearance to investigate the disturbance.

They are not close sitters, and usually leave the nest before the tree is reached or the ladder placed against the trunk. As soon as an intruder's footsteps become audible the landlady pokes her head from the entrance, and soon after departs, never giving opportunity for capturing her on the nest. Deserted flicker nest holes are made use of by several other birds. In these holes I have often found Sparrow-hawks and Saguaro Screech Owls. Once a Bendifre Thrasher made her nest in one with a crack in one side that let in light enough for her. In a partly excavated hole I found the nest of a Western Kingbird, and in another the nest of a House Finch. Occasionally the Cactus Wren builds in the deserted hole. In one Saguaro I found occupied nests of the Gilded Flicker, Gila Woodpecker, and Ash-throated Flycatcher. A Cactus Wren was in an ironwood at the base of the cactus, and, beyond reach of the ladder, were holes giving signs of occupancy by owls. I have never secured any of these flickers in the red phase of plumage described by Mr. Grinnell (University of California, Publications in Zoology, vol. 12, 1914, pp. 136-137) though I have noticed a few that seemed deeper in color than others.

Fort Bidwell, California, May 1, 1915.

FURTHER NOTES FROM THE SAN BERNARDINO MOUNTAINS

By ADRIAAN VAN ROSSEM and WRIGHT M. PIERCE

THESE NOTES are taken from a list of a hundred odd species noted in the vicinity of Big Bear Lake and Bluff Lake in the San Bernardino Mountains, southern California, between September 15 and 23, 1914. Only those species are included which for one reason or another may be deemed worthy of comment.

Colymbus nigricollis californicus. Eared Grebe. Common on Bear Lake, where, much to our surprise, downy young were not uncommon at this late date. A series of young taken September 17 graded all the way from apparently newly hatched chicks to fully grown birds in complete fall plumage. While the majority of adults were still in full, though rather worn, breeding dress two were taken which in life were not distinguishable from fall juvenals.

Porzana carolina. Sora. One was flushed from the grass at the edge of Big Bear Lake, September 17. Though recorded previously on but two occasions Soras are probably not uncommon migrants through the locality. It is doubtful if they breed there.

Oreortyx picta plumifera. Plumed Quail. Unexpectedly rare, in fact apparently absent from the region under consideration. The only evidence of the species found were some feathers in the trail at Clark's Ranch (elevation 5000 feet), in the Santa Ana Canyon.

Circus hudsonius. Marsh Hawk. A female seen beating over the lake, September 22.

Falco mexicanus. Prairie Falcon. A female of the year taken at Big Bear Lake on September 17, and another (judged to be a male) seen in the same locality September 20.

Xenopicus albolarvatus. White-headed Woodpecker. But very few of the specimens taken had completed the fall molt; the majority still retained the worn summer feathers on the belly and center of the breast. As this condition was common to both adults and birds of the year it seems not improbable that the fall molt of both occurs at approximately the same time. Those which had complete new plumage were juvenals, very likely of early broods.

White-headed Woodpeckers were often observed to drink at a small stream near our camp at Bear Lake, where a pine sapling grew from the edge of a small pool. On

this sapling the birds would alight, usually about three feet from the base, "hitch" quickly backwards down the trunk to the water, and, leaning sharply to one side, drink by quick, nervous dips. One was seen actually on the sand, evidently preparatory to drinking or bathing, but was frightened away by our approach.

Sphyrapicus ruber daggetti. Sierra Sapsucker. Not uncommon about Bluff Lake. Noticeably fewer in numbers at Bear Lake. All those taken were juvenals in nearly complete fall plumage, though all retained a belt of old feathers across the upper breast. In common with the Williamson Sapsuckers they were most often seen near the headwaters of the numerous little canyons running into the two lakes. There they were often gathered in threes or fours, flycatching after the manner of the California Wood-pecker. On several occasions a Williamson was noted with these groups.

Sphyrapicus thyroideus. Williamson Sapsucker. Noted over the same range and in about the same numbers as the last species. Adults and young alike had entirely completed the fall molt.

Chordeiles virginianus hesperis. Pacific Nighthawk. One flew over camp at Bear Lake at sunset on the 18th of September. A long wait by the lake shore at dusk resulted in the sight of one (perhaps the same bird) flying over the lake.

Chaetura vauxi. Vaux Swift. A group of three seen flying west along the shore of Bear Lake, September 18.

Calypte anna. Anna Hummingbird. Female taken at Bear Lake, September 22.

Stellula calliope. Calliope Hummingbird. Apparently rather common near the summit above Clark's Ranch, where several females or young were feeding from a patch of flowers on September 16.

Nuttallornis borealis. Olive-sided Flycatcher. Still present in considerable numbers. Noted over the entire region covered.

Myiochanes richardsoni. Western Wood Pewee. A pair was usually in evidence about camp at Bear Lake. Last noted on September 20, when a young bird was taken at a water hole about half way between Bear and Baldwin lakes. This bird was in juvenile plumage and was accompanied by two adults.

Empidonax wrightii? Wright Flycatcher. One was seen at very close range in a willow clump near Bear Lake on September 22. Flycatchers were seen on one or two other occasions previous to this, but none was taken.

Otocoris alpestris actia. California Horned Lark. Rather uncommon in the dry pastures near Bear Lake.

Cyanocitta stelleri frontalis. Blue-fronted Jay. Though most of the year's young, and all the adults, apparently had completed the fall molt, one juvenal taken September 18 was still in ragged plumage. The old feathers still predominated on the upper parts, head and neck, and on the central underparts.

Aphelocoma californica. California Jay. Though common on the lower, chaparral-covered slopes, this species was noted but once in the higher mountains, where a bird was seen near the divide between Bear and Baldwin lakes, at 7000 feet.

Cyanoccephalus cyanocephalus. Pinyon Jay. Common in good sized, straggling flocks, about the east end of Bear Lake, and in smaller numbers about Bluff Lake. In the series taken the adults average lighter in color, and the feathers already show signs of wear, while the birds of the year are in more recently acquired, and consequently brighter, plumage.

Pooecetes gramineus confinis. Western Vesper Sparrow. Apparently not uncommon on the dry brushy flats near the east end of Bear Lake. First noted September 17.

Zonotrichia leucophrys gambeli. Gambel Sparrow. First noted September 18, when one was taken at Bear Lake. Seen thereafter in small numbers.

Passerella iliaca schistacea. Slate-colored Sparrow. Two taken September 23, one on the summit between Bluff Lake and the Santa Ana Canyon, and another in the dense manzanita brush above Clark's Ranch in the same canyon. Five or six were noted scattered between these two points.

Passerella iliaca stephensi. Stephens Fox Sparrow. Still present in the mountains, though not in anything like the numbers in which it is found during the summer months. Apparently absent altogether from the immediate vicinity of Bluff Lake, where during the breeding season it is abundant. Eight specimens were taken, one on the summit between Bluff Lake and the Santa Ana Canyon (September 16), and seven in a small canyon near the east end of Bear Lake (September 22). All were seemingly adults and

mostly in rather ragged plumage. The old feathers had been molted, and the new ones not fully developed, many being still ensheathed at their bases. As young birds in complete fall plumage were taken in the same general locality in August (1910), it is fair to conclude that the post-juvenile molt antedates by several weeks the annual molt of the adults.

Oreospiza chlorura. Green-tailed Towhee. Noted in moderate numbers; rather more in evidence than during the summer months.

Piranga ludoviciana. Western Tanager. Noted only on September 22, when one was taken and another seen.

Vermivora rubricapilla gutturalis. Calaveras Warbler. Recorded on but three occasions, the last date being September 22.

Vermivora celata lutescens. Lutescent Warbler. Apparently absent from the higher mountains. Common about Clark's Ranch in the Santa Ana Canyon, both on September 15 and September 23.

Dendroica nigrescens. Black-throated Gray Warbler. One taken and another seen at Bear Lake, September 22.

Opornis tolmiei. Macgillivray Warbler. One seen at Bear Lake September 19, and two on the summit between Bluff Lake and the Santa Ana, September 23.

Geothlypis trichas occidentalis. Western Yellow-throat. Observed but once, when a male of the year was taken at Bear Lake, September 22.

Wilsonia pusilla chryseola. Golden Pileolated Warbler. Noted only near Bear Lake September 21 and 22.

Troglodytes aedon parkmani. Western House Wren. Two seen on several occasions in a willow clump near Bear Lake.

Myadestes townsendi. Townsend Solitaire. Seen on the summit above Bluff Lake, at Bear Lake and at Baldwin's Lake. Usually associated with small flocks of Western Bluebirds.

Planesticus migratorius propinquus. Western Robin. A bird of the year taken September 22 is still plentifully sprinkled with spotted juvenal feathers. But one other robin seen, and that on the same date.

Dos Cabezas, Arizona, November 20, 1914.

FROM FIELD AND STUDY

Dwarf Cowbird on the Coronado Islands.—On a recent visit to North Island of the Coronados group, one of our party, Mr. C. O. Reis, secured an adult male of the Dwarf Cowbird (*Molothrus ater obscurus*). The bird was taken May 31, 1915.—A. E. COLBURN, *Los Angeles, California*.

Dwarf Cowbird in the San Diegan Region.—Although the eggs of the Cowbird (*Molothrus ater obscurus*) have been reported from the San Diegan region not uncommonly, specimens of the bird are not extensively recorded. Miss Emily Hollister of the State Normal School, Los Angeles, placed in my hands on January 26, 1915, a female of this species. The bird had been picked up dead by one of her students within the city limits of Los Angeles. It was in good condition and plumage. The unguinal phalanges of all toes of the right foot were missing, but the scars were old, and the injury could not have interfered greatly with the bird's activities. On June 5, 1915, Mr. J. E. Law and the writer were collecting among willows along the Los Angeles River near Lankershim, when the notes of a cowbird were heard. The bird, an adult male, was finally secured by Mr. Law, who suggested its being recorded in connection with the above.—L. H. MILLER, *Los Angeles, California*.

A Striking Plumage of the Western Tanager.—On May 16, 1915, Mrs. Mary Case Durant of Los Angeles, brought to me a specimen of the Western Tanager (*Piranga ludoviciana*), which had broken its head in collision with electric wires at her residence, in this city. The bird is striking because of the extreme development of the red factor in its plumage. Not only is the head unusually intense in color, but red feathers invade the rump patch and the breast and belly regions, while the entire anal tuft is red also.—L. H. MILLER, *Los Angeles, California*.

Bluebird Breeding in Los Angeles.—The Western Bluebird (*Sialia mexicana occidentalis*) so seldom breeds in low country of the San Diegan region that a fledgling of the species picked up in a lot near the State Normal School, Los Angeles, constitutes a surprise worth recording. The bird was scarcely able to fly, and could not have traveled far from its parental nesting site. The date was May 31, 1915.—L. H. MILLER, *Los Angeles, California*.

Pinyon Jays in Los Angeles.—During the months of December, January, February, and March, 1914-15, there remained in the vicinity of my home in this city a flock of these erratic birds, *Cyanoccephalus cyanocephalus*. They were heard at intervals and were seen by Miss Mary Mann Miller and myself. A good view at close range with Zeiss binoculars, together with their unmistakable calls, renders identification quite positive.—L. H. MILLER, *Los Angeles, California*.

History of a Nest of the Green-backed Goldfinch (*Astragalinus psaltria hesperophilus*).—April 4, 1915. Nest just started; placed in a four-year-old lemon tree, five feet from the ground. The parent birds had been noted around the lemon tree for several days previous to this date, and were evidently house hunting. Fine weather.

April 11. Nest was now practically finished, but no birds were in sight. Still fine weather.

April 13. Nest now received a few stray feathers for lining. No birds in sight. Fine weather.

April 14. Female on nest at 6 A. M. Two eggs in nest at 6:45 A. M., and bird away. I looked again at 7:30 and she was still away. Partly cloudy.

April 15. Female on nest at 6 A. M. Two eggs in nest at 6:45 A. M., and bird away. I looked again at 7:30, and she was still gone. Partly cloudy.

April 16. Female on nest at 6 A. M., at 7 A. M., and 6 P. M. Weather very foggy.

April 17. Female on nest at 6 A. M. I then flushed her, and the nest contained four eggs. Evidently she had started to incubate. Weather quite misty.

April 18. Female on nest all day apparently. Weather cloudy. Bird is now getting quite a bit tamer.

April 19. Female on nest at 6 A. M., and so tame I nearly touched her before she flew. Cloudy.

April 20 to 23. No observations.

April 24. The old bird now had to be taken from the nest, as she would not leave voluntarily. Cloudy.

April 25. The bird now fought me when I wanted to examine the nest.

April 26. No change.

April 27. At 5 A. M. one bird had just hatched.

April 28. At 6:30 P. M. three were hatched.

April 29. At 6:30 A. M. four were hatched. Bird held on to nest with her claws when I attempted to remove her.

April 30. 6:30 A. M. Old bird still holding the fort, and very pugnacious.

April 31. 6 P. M. Finis. Nest torn down and a few stray feathers on the ground under the tree. The whole family just about made a meal for one of my neighbor's pet cats.—W. LEE CHAMBERS, *Los Angeles, California*.

Miscellaneous Records from Southern California.—Wilson Phalarope (*Steganopus tricolor*). On April 17, 1915, I shot a pair of Wilson Phalaropes in breeding plumage on one of the ponds of the Pomona Recreation Club, near Corona, California. They were swimming about with several Cinnamon Teal (*Querquedula cyanoptera*) and a pair of Baldpate (*Mareca americana*). The two birds are: female, no. 814, and male, no. 815, collection of W. M. P. On May 11, 1915, I shot a female Wilson Phalarope in breeding plumage, on a pond near Corona, California. The bird is now no. 872 of my collection.

Bald Eagle (*Haliaeetus L. leucocephalus*). While collecting on one of the sloughs near San Pedro, California, May 16, 1915, one of these beautiful birds came quite near me. It circled about several times so that identification was certain.

I saw an adult Bald Eagle on April 11, 1915, sitting on a dead bush on one of the rocky cliffs along the ocean near Laguna Beach, California. I was able to approach very near to the bird, its white head and tail making identification certain.

Prairie Falcon (*Falco mexicanus*). The following notes on the occurrence of the Prairie Falcon on the Pacific slope during fall and winter may be of interest. On Octo-

ber 8, 1914, while hunting doves near Chino, California, I shot a female Prairie Falcon that was trying to get a dove that I had flushed from the sunflowers. Later on the same day another of these beautiful falcons flew over me a little too far to shoot. On December 9, 1914, I shot a female Prairie Falcon from a telephone pole near the beach not far from Oceanside, California. On January 9, 1915, I collected another female Prairie Falcon near Chino, California. My attention was drawn to this bird, which was sitting in a large branching willow, by the actions of some Red-winged Blackbirds (*Agelaius phoeniceus neutralis*) that were sitting about in the same tree with the falcon. Several of their number kept persistently flying at the falcon, who apparently cared little for their actions, as he sat quietly until I approached the tree.

Western Flycatcher (*Empidonax difficilis difficilis*). On July 5, 1914, in the upper part of Bear Canyon, a branch of the West Fork of the San Gabriel, I found a nest containing three eggs, incubation begun, of the Western Flycatcher. Then on July 17, 1914, at Cold Brook Camp, elevation 3500 feet, in the North Fork, another branch of the West Fork of the San Gabriel, I found another nest of the Western Flycatcher containing three fresh eggs. This last nest was placed on a beam of the dance hall, where there were many people going in and out all the time. The bird did not seem to be bothered at all by the continual noise and disturbance. The late nesting dates are noteworthy.

Vermilion Flycatcher (*Pyrocephalus rubinus mexicanus*). While hunting on the ponds of the Pomona Recreation Club, near Corona, on December 13, 1914, I shot a female Vermilion Flycatcher. The bird was feeding in a willow tree that grew well out in a pond. As the species is of rather rare occurrence in this locality I thought the record worthy of note.

Phainopepla (*Phainopepla nitens*). On January 10, 1915, I shot a male Phainopepla, and saw another, on the Pomona Recreation Club, near Corona, California. These grounds are located in the willow bottom near the Santa Ana River. The bird was feeding on mistletoe berries. Several times during December I had heard the note of the Phainopepla in this same locality, but it was not until the above date that I actually saw one. Since then I have heard their call several times. Then on January 23, 1915, H. White obtained another specimen in the same place. This goes further to prove that the Phainopepla winters in small numbers in favorable localities in southern California. However, I have not met with them in the foothill and mesa regions until well along in March.

Western Winter Wren (*Nannus hiemalis pacificus*). I collected a female of this species on January 21, 1915, at the mouth of San Dimas Canyon, Los Angeles County, California. It is interesting to note that this is the only one that I have seen during about twenty collecting trips to the locality during this winter. Nor have I met with the bird on several other trips during this period, from the base of the foothills to 5000 feet elevation in the mountains of this locality.—WRIGHT M. PIERCE, Claremont, California.

California Screech Owl in the Humboldt Bay Region.—The lack of published statements regarding the occurrence of any form of *Otus asio* in the vicinity of Humboldt Bay, California, makes it desirable that record be made of certain specimens recently taken in that region. Mr. Franklin J. Smith has donated two of several screech owls he has secured, one to the Museum of Vertebrate Zoology, and one to the Los Angeles Museum of History, Science and Art. These are both breeding females, from the vicinity of Eureka, and are essentially alike in appearance. Detailed comparison has been made between one of these birds (Mus. Vert. Zool. no. 25378) and series from other parts of the Pacific coast. As compared with *Otus asio bendirei* from the San Francisco Bay region it is strikingly dark colored, and of large size (length of wing, 176 mm.). As compared with a topotype of *brewsteri* it is darker and less reddish. Size comparisons with the latter are not possible, as the two are of different sex. Compared with an example of *kennicotti* from Tacoma, it is slightly larger and much less reddish. The striking feature of the two Humboldt Bay birds is that while they are of intensely dark color, there is little of reddish or rich brown in their appearance. They depart appreciably from the normal of *bendirei* of the San Francisco Bay region, but do not approach the more reddish hue of *brewsteri* and *kennicotti*. For the present it seems best to class them with *bendirei*, representing an extreme of difference from *querquinus* of southern California, and await the acquisition of additional material from the northern coast region to more definitely settle their status.—H. S. SWARTH, Museum of History, Science and Art, Los Angeles, California.

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EDITORIAL NOTES AND NEWS

THE PACIFIC COAST MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION

For the first time in the history of the organization, a regular congress of the American Ornithologists' Union has convened in western North America. On Monday evening, May 17, 1915, the Thirty-third Stated Meeting of the Union was called to order in the rooms of the California Academy of Sciences, in San Francisco. This, the formal session of the Fellows, was devoted to the transaction of general business. Dr. A. K. Fisher presided, with the following Fellows present: Dr. Jonathan Dwight, of New York; Dr. A. K. Fisher, of Washington; Professor W. K. Fisher, of Stanford; Dr. Joseph Grinnell, of the University of California; Mr. Leverett M. Loomis, of San Francisco; Mr. Joseph Mailliard, of San Francisco; Dr. T. S. Palmer, of Washington; Dr. C. Hart Merriam, of Washington; Mr. John H. Sage, of Portland, Connecticut; Dr. Witmer Stone, of

Philadelphia; and Mr. Otto Widmann, of St. Louis.

On the following three days the public sessions, those of general interest, were held in a centrally located auditorium on the Exposition grounds. There was an average attendance of 50 members of the A. O. U. and of the Cooper Ornithological Club, with many visitors. The following program of papers was presented.

Tuesday forenoon, May 18.

1. "Notes on the Life-history of Penguins, with Special Reference to the Origin of Certain Instincts"; with superb lantern slides; by Robert Cushman Murphy, of Brooklyn.

2. "Oregon Bird-life in Motion Pictures"; the latest successes in motion photography; by William L. Finley, of Portland, Oregon.

Lunch was served to the A. O. U. and their friends at the Inside Inn, on the Exposition Grounds.

Tuesday afternoon, May 18.

3. "Philadelphia to the Coast in Early Days, and the Development of Ornithology Prior to 1850"; by Dr. Witmer Stone, of Philadelphia.

4. "In Memoriam—Theodore Nicholas Gill"; by Dr. T. S. Palmer, of Washington.

5. "The Migration of Albatrosses and Petrels"; by Mr. Leverett Mills Loomis, of San Francisco; discussion by Dr. T. S. Palmer, and Messrs. Murphy, Nichols and Loomis.

6. "A Late Nesting Record for the California Woodpecker"; by Mrs. Harriet Williams Myers, of Los Angeles.

7. "The Average Age of the Herring Gull"; by Mr. John Treadwell Nichols, of New York City.

Dinner in the evening for all members of the A. O. U. and C. O. C., and their invited friends, at the Clift Hotel. Between fifty and sixty were present and the occasion was a most happy one.

Wednesday forenoon, May 19.

8. "Puzzling Immature Plumages of Some Birds"; by Dr. Jonathan Dwight, of New York City; discussion by Messrs. Loomis and Dwight.

9. "The Shore-birds of California"; illustrated by a long series of artistic lantern slides; by W. Leon Dawson, of Santa Barbara.

10. "The Pacific Coast Races of *Thryomanes bewickii*"; by Mr. Harry S. Swarth, of Los Angeles; read by title.

Lunch served to the A. O. U. and C. O. C. at the Chinese restaurant in the Food Products building.

Wednesday afternoon, May 19.

11. "Birds of the Grand Canyon, Arizona"; by Dr. T. S. Palmer, of Washington.

12. The Salisbury wild life motion pictures, presented, with comments, by Dr. Harold C. Bryant, of Berkeley.

13. "Farallon Island Bird Life"; in motion picture; by Mr. Paul J. Fair, of Oakland.
14. "Niche of the California Thrasher"; by Dr. Joseph Grinnell, of Berkeley. Discussion by Dr. T. S. Palmer, Mrs. Myers, and Messrs. Dawson and Grinnell.

Thursday forenoon, May 20.

15. "The Genus Problem in Present Day Nomenclature"; an able discussion of a pressing problem; by Dr. Witmer Stone, of Philadelphia.

16. "The Work of the National Association of Audubon Societies"; by Mr. T. Gilbert Pearson, of New York City.

17. "Two Characteristic California Waders: the Black-necked Stilt and the Snowy Plover"; with lantern slides; by Mr. Tracy I. Storer, of Berkeley; remarks by Messrs. Murphy, Dawson and Joseph Mailliard.

18. "Food Habits of the Roadrunner"; by Dr. Harold C. Bryant, of Berkeley.

19. "History of the Bohemian Waxwing in British Columbia"; by Mr. Ernest M. Anderson; read by title.

On Thursday afternoon a portion of the visiting delegates were conducted to the summit of Mt. Tamalpais. Others visited the California Museum of Vertebrate Zoology at Berkeley. On Friday an all-day excursion on the U. S. Fish Commission ship, Albatross, was enjoyed by over eighty members and friends of the two ornithological societies. Snap shots of some of the participants are presented on the last two pages of this issue of *THE CONDOR*. On Saturday the convention disbanded. A number of the A. O. U. people went to the Yosemite Valley where some of them listened for the first time to the thrilling notes of the Canyon Wren and Water Ouzel.

The above brief outline of happenings at the A. O. U. Congress can give but a faint idea of the atmosphere of the occasion. The setting at the Exposition was unique and doubtless will never be duplicated. We voice the hope, however, that it may become the custom to hold an A. O. U. Congress on the Pacific Coast regularly in the future, say every fifth year.

PUBLICATIONS REVIEWED

SPENCER | FULLERTON BAIRD | A BIOGRAPHY | including selections from his correspondence | with Audubon, Agassiz, Dana, and others | By | WILLIAM HEALEY DALL, A. M., D. Sc. | with nineteen illustrations | [vignette] | Philadelphia & London | J. B. Lippincott Company | 1915 ["published April"] | pp. xvi + 462, 19 unnumbered plates. (\$3.50.)

The book of the above title is of more than ordinary interest to western bird students. Baird was intimately identified with the scientific operations of the Pacific Railroad Surveys and with the publication of

the results of those operations. The wealth of biographical detail collected by Dr. Dall concerning Professor Baird thus provides a great number of facts relative to the early history of ornithology in our western states.

The book contains many letters written by the notable naturalists of the times, and many interesting side-lights are thereby thrown upon the relationships and characters of these men. Baird himself was evidently the inspiring genius of his period. Practically every important achievement in the field of vertebrate zoology seemed to have been either initiated by him or prominently fostered by him.

We owe a very great deal to Dr. Dall for his expenditure of labor in making available a full account of Baird's life and activities. This is the one biography of recent publication that has appealed to the reviewer as most emphatically worth reading. The present-day naturalist, young and old alike, cannot fail to get inspiration as well as enjoyment out of it.—J. GRINNELL.

BIRDS OF NEW YORK, by ELON HOWARD EATON. Part 2. General Chapters; Land Birds. 1914 (our copy received March 20, 1915). Pp. 1-719, pls. 43-106. (For full title and review-note of Part 1, see CONDOR, XII, 1910, p. 207.)

As with Part 1, the prominent feature of this elaborate state publication lies in its illustrations. There are colored plates, representing nearly every species of bird indigenous to New York, from the brush of L. A. Fuertes. These have been reproduced for the most part with marked success.

The text treatment of species is necessarily not exhaustive. The descriptions are brief, and properly so where colored plates are so bounteously provided as in the present book. "Distribution" and "Haunts and habits" naturally relate almost wholly to the state concerned.

Of general interest are the introductory chapters. These bear titles as follows: Bird ecology; the economic value of birds; the status of our bird laws; Special measures for increasing bird life; Bird refuges; Private preserves. Under these captions the various matters are impartially discussed, the conclusions according for the most part with the results of experience elsewhere. As means of increasing bird population, Eaton gives first importance to the erection of artificial nesting sites, this with due regard to the predilections of English Sparrows and house cats. The planting of food-producing trees, and the provision of watering places during the summer, are also recommended.

With so comprehensive a work on its ornithology, New York State takes front rank as a commonwealth which recognizes the importance of supplying its schools and libraries with adequate treatises upon its natural history.—J. GRINNELL.

MINUTES OF COOPER CLUB MEETINGS

NORTHERN DIVISION

APRIL.—The regular monthly meeting of the Northern Division of the Cooper Ornithological Club was held at the California Academy of Sciences, 343 Sansome Street, San Francisco, April 15, 1915, at 8 p. m. President Mailliard was in the chair with the following members present: Mrs. Grinnell, and Messrs. Evermann, Grinnell, Ray, Reynolds, Squires, Storer and Trenor. Two visitors were present.

The minutes of the Northern Division March meeting were read and approved and the minutes of the Southern Division March meeting read. Mrs. Mary Van E. Ferguson and the twenty-two persons proposed at the Southern Division in February were elected to membership. The applications of Judge F. W. Henshaw, Supreme Court, San Francisco, proposed by J. Grinnell, and four persons from the Southern Division were read.

A communication from Professor J. N. Bowman, Secretary of the Pacific Association of Scientific Societies, was received stating that the constitution of the Pacific Division of the American Association for the Advancement of Science had received the necessary two-thirds vote from the constituent societies and that the work of the Pacific Association will be taken over by the Pacific Division at the close of the August meeting.

President Joseph Mailliard, as chairman of the arrangements committee for the A. O. U. meeting in San Francisco in May, outlined the plan of entertainment which will be provided. The plans were discussed by a number of those present. Notes on rare or unusual occurrences were offered by several of those present. Joseph Grinnell presented some of the problems as to the inclusion and rejection and the status of a number of species of birds in his forthcoming State List. A lively discussion followed. Adjourned.—TRACY I. STORER, *Secretary*.

SOUTHERN DIVISION

APRIL.—The regular meeting of the Southern Division was held at the Museum of History, Science and Art Thursday evening, April 29. President Law was in the chair and the following members were in attendance: Mrs. Husher, and Messrs. Blain, Brown, Chambers, Colburn, Cookman, Daggett, Holland, King, Law, Little, Morcom, Miller, Noakes, Polkinghorn, Rich, Swarth

and Wyman. Visitors present were Mrs. Law, Dr. and Mrs. S. A. Williams, and Mr. and Mrs. Emerson Atkins.

The minutes of the March meeting were read and approved, followed by the reading of the minutes of the April meeting of the Intermountain Chapter. New members were elected as follows: Miss Ellen G. Scott, Tropico, California; Mrs. Katherine S. Wakeley, Los Angeles; J. Frank Wilson, Monrovia, California; Chas. O. Trowbridge, Framingham Center, Mass. New names proposed were: W. W. Richards, Oakland; Carroll DeW. Scott, Pacific Beach; E. B. Trescot, Merced; all presented by W. Lee Chambers; and George Tallman, Los Angeles, proposed by G. Willett.

The committee on arrangements for entertainment of the A. O. U. reported on the probable plans for the occasion. The greater part of the evening was devoted to an exhibition of lantern slides of the bird colonies of Layasan Island. These were from pictures taken by Mr. George Willett during his visit to the island in 1913. Adjourned.—H. S. SWARTH, *Secretary*.

MAY.—The regular meeting of the Southern Division was held at the Museum of History, Science and Art, Thursday evening, May 27, 1915, with President Law in the chair and the following members present: Miss Germain, and Messrs. Brown, Chambers, Daggett, Holland, Jewett, Little, Miller, Rich, Swarth, Tallman, and Wyman. Mrs. Law was a visitor.

The minutes of the April meeting were read and approved, followed by the April minutes of the Northern Division and the May minutes of the Inter-Mountain Chapter. Four new members were elected: George Tallman, Los Angeles; E. B. Trescot, Merced; Carroll DeW. Scott, Pacific Beach; W. W. Richards, Oakland. One new name was presented, Richard D. Lusk, Winkelman, Arizona, proposed by W. Lee Chambers. A motion was passed confirming the elections at the April Northern Division meeting.

A communication was read from officials of the American Association for the Advancement of Science, urging Cooper Club members to join the Association, which was strongly endorsed by such club members as happened already to belong. Mr. Wyman reported on bird banding, and Mr. Law gave many details of the American Ornithologists' Union meeting at San Francisco the previous week. Adjourned.—H. S. SWARTH, *Secretary*.



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Fig. 61. SNAP SHOTS FROM THE A. O. U. MEETING AT SAN FRANCISCO. A. DR. A. K. FISHER AND DR. JONATHAN DWIGHT, JR. B. LOWER ROW: MESDAMES STONE, LAW, AND WIDMANN; MESSRS. STONE, FISHER, AND SAGE. C. DR. C. HART MERRIAM AND MR. J. EUGENE LAW. D. MESSRS. W. OTTO EMERSON, TRACY I. STORER, AND H. C. BRYANT.



FIG. 62. SNAP SHOTS FROM THE A. O. U. MEETING AT SAN FRANCISCO. A. MESSRS. WITMER STONE, A. K. FISHER, AND JOHN H. SAGE. B. MESSRS. JOHN W. MAILLARD, A. K. FISHER, AND JOSEPH OTTO WIDMANN. MR. JOHN H. SAGE, AND DR. JONATHAN DWIGHT, JR. D. MR. R. BRUCE HORSEFALL, DR. JONATHAN DWIGHT, JR., MR. AND MRS. J. EUGENE LAW, MR. JOHN H. SAGE, MR. J. T. NICHOLS, DR. A. K. FISHER.



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WANTED—Complete sets of Wilson Bulletin and Ornithologist & Oologist; also Forest and Stream before 1896.—JOHN C. PHILIPS, Windyknob, Wenham, Mass.

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of the whereabouts of these volumes communicate with me and oblige.—H. H. BAILEY, *Newport News, Virginia*.

WANTED—Copies of any of the following publications. Nidologist, vol. 1, no. 2, Oct., 1893; Osprey, N. S., 1902, March, April and July; Oologist, May and December, 1897, April and September, 1899; Wilson Bull., no. 4, 1894.—B. H. SWALES, *Grosse Isle, Mich.*

I WANT one copy each of "The Blue Bird", vol. 6, nos. 1 and 2, published at Cincinnati, Ohio; edited by Dr. Eugene Swope.—W. LEE CHAMBERS, *Eagle Rock, Los Angeles County, California*.

OVERFLOW list of your duplicates wanted as follows: Random Notes on Nat. Hist. I, 2, 3; II, 12; III, 5, 6, 10, 11. Oregon Naturalist [=Naturalist, Oregon City] I, 12 (Nov.-Dec., 1894). Field and Forest, I, 5, 6; II, 5, 6, 7; III, 3, 4, 6, 9, 10, 11, 12. Parts or volumes of these: Amer. Osprey, Ky.; Birtern, Canistee, N. Y.; Canadian Sportsman and Naturalist; Collectors Monthly; Forest and Field, N. Y.; Hawkeye O. & O.; Hoosier Nat.; Hummer; Loon; Maine O. & O.; Naturalist & Tax.; Observer I, 4; and Audubon Magazine II, 2.—Dr. W. C. BRAISLIN, 556 Washington Ave., Brooklyn, N. Y.

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—J. N. SWIFT, Stockport, Ohio.

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